

## Pattern of Breast Diseases in the Surgical OPD of a Medical College Hospital

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### Abstract

**Introduction:** Breast diseases are quite common conditions encountered in surgical practice, ranging from benign to malignant lesions. Early diagnosis and management are crucial to reduce morbidity and mortality. This study was conducted to determine the pattern and frequency of various breast diseases among female patients attending the surgical outpatient department of a medical college hospital.

**Methods:** It was a retrospective descriptive study conducted at Green Life Medical College hospital, Dhaka from 1st January, 2020 to 31st December, 2022. Female patients presenting with complaints regarding breast were recruited in the study. All of them underwent clinical breast examination followed by necessary radiological and / or histopathological investigations to diagnose the disease and were treated accordingly.

**Results:** A total of 292 patients were included. Fibrocystic disease was the commonest disease (45.89%) followed by fibroadenoma (19.18%), breast abscess (10.62%) and carcinoma (5.82%). Pain in the breast was the commonest presenting symptom (43.1%). Lump in the breast was found in 36.3%, while pain and lump were present in 29.8% of patients. 52% patients received surgical treatment whereas 48% patient were treated conservatively. Excision & biopsy was the commonest surgical procedure (26%) followed by Incision & drainage and wide local excision (9.6%).

**Conclusion:** Breast complaints are quite common in surgical practice. Benign breast diseases are more common than the malignant ones. Fibrocystic disease is the commonest breast problem. Malignancy of breast presents usually in late stages.

**Keywords:** Fibrocystic disease, Fibroadenoma, Breast abscess, Carcinoma

### Introduction:

Breast symptoms are quite common in surgical practice.<sup>1</sup> Breast tissue undergoes continuous physiological and structural changes throughout a woman's reproductive life, influenced by hormonal fluctuations during puberty,

menstruation, pregnancy, lactation, and menopause.<sup>2</sup> These variations make the breast vulnerable to a wide range of disorders, from self-limiting inflammatory conditions to life-threatening malignant lesions.<sup>3</sup>

Benign breast diseases are more prevalent than malignant ones and account for the majority of breast-related complaints in women attending surgical clinics.<sup>4,5,6</sup> Among them, fibrocystic disease is the most common, particularly affecting women of reproductive age.<sup>7</sup> Other frequent benign lesions include fibroadenoma, breast abscess, duct ectasia, and mastalgia. Malignant breast diseases, though less frequent, represent a major global health concern because of their high morbidity and mortality.

The presenting complaints of breast diseases vary considerably, but breast lump, pain, and nipple discharge are the most common.<sup>8</sup> A careful clinical evaluation, supplemented by imaging and histopathological

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investigations, is essential for accurate diagnosis and timely management. The “triple assessment” approach—clinical examination, imaging (mammography or ultrasonography), and cytological or histopathological confirmation—remains the cornerstone of evaluation for breast lesions.<sup>9</sup>

Globally, the pattern and frequency of breast diseases differ by geographic region, age, lifestyle, and awareness level.<sup>10</sup> In developing countries, lack of awareness, social stigma, and limited access to screening often lead to delayed presentation, especially for malignant cases. As a result, breast cancer frequently presents at an advanced stage, reducing the chances of curative treatment and survival.<sup>11</sup>

Understanding the local pattern of breast diseases helps clinicians prioritize diagnostic strategies, allocate resources efficiently, and plan preventive measures.<sup>12</sup> It also assists in identifying demographic or clinical factors associated with late presentation or poor outcomes.<sup>13</sup>

Therefore, this study was undertaken to determine the pattern of breast diseases among female patients presenting to the Surgical Outpatient Department (OPD) of Green Life Medical College Hospital, Dhaka. The findings are expected to contribute to the existing literature and improve awareness and management strategies for breast diseases in similar healthcare settings.

### Methods:

This is a retrospective hospital based descriptive study conducted in the Surgical OPD of Green Life Medical College between 1<sup>st</sup> January, 2020 and 31<sup>st</sup> December, 2022. A total of 292 patients were included. The informed consent was taken from each participant and data collected regarding the personal information with the presenting complaints and findings.

All the female patients with complaints of breast problems were included in this study. They were evaluated by clinical history including detailed history of the breast complaint presented, general physical examination, examination of breast and axilla along with the supraclavicular fossa for any palpable lymph nodes.

All female patients attending the Surgical Outpatient Department of Green Life Medical College Hospital during the study period with breast-related complaints were included in the study, irrespective of age. Patients were included if they had adequate clinical evaluation and relevant investigations to establish a diagnosis. Male patients, incomplete records, and cases with inadequate diagnostic information were excluded from the analysis.

The necessary investigations such as Ultrasonography of both breasts and axillae, Mammography, Fine Needle Aspiration Cytology, Trucut biopsy, Cytology of nipple discharge, Excision & biopsy were done to assess various breast problems.

The final diagnosis was made with the clinical findings along with specific investigation of the breast and the histopathology of the lump.

A diagnosis of fibrocystic disease was made clinically in patients presenting with cyclical/ non-cyclical, premenstrual, bilateral or unilateral breast pain & tenderness associated with generalized lumpiness or nodularity of the breast. In few cases diagnosis was confirmed by biopsy or aspiration cytology.

Those with acute mastitis or breast abscess presented with acute breast pain, fever, lump and edema of the breast with marked tenderness and in some cases with history of lactation.

Diagnosis of patients presenting with benign or malignant breast lump were confirmed by FNAC, Trucut biopsy or excision biopsy.

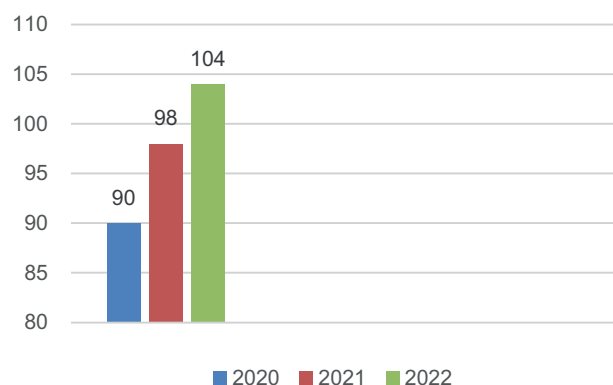
Treatment was offered according to their diagnosis. Patients with fibrocystic disease were treated conservatively with reassurance, analgesics & support to the breasts and were advised to come for follow-up after three months to assess the outcome. Patients with acute mastitis were treated with antibiotics, analgesia & support to the breast and those with breast abscess underwent incision & drainage followed by regular dressing. Patients with benign breast lumps underwent excision & biopsy. Those with malignant breast lumps were managed with surgery, hormone therapy with or without chemotherapy.

All collected data were entered into Microsoft Excel (MS Office 2019) and analyzed descriptively. Results were expressed in terms of frequency, percentage, and proportion to demonstrate the distribution of various breast diseases, presenting symptoms, and treatment modalities. Findings were presented in tabulated and graphical forms for clarity and comparison.

This study was conducted in a single medical college hospital, which may limit the generalizability of the findings. The sample size was relatively small, and histopathological confirmation was not available for all cases.

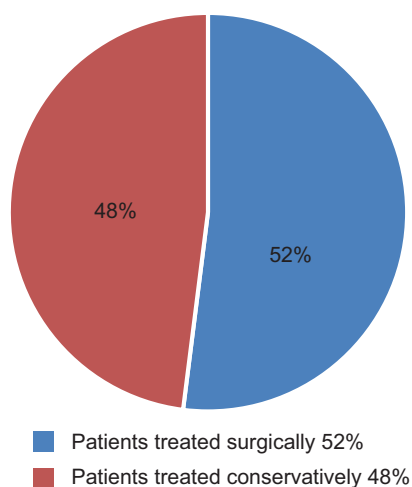
### Results:

A total number of 292 patients were seen during this period. Out of 292 patients, 90 (30.82%) presented in 2020, 98 (33.56%) in 2021 and 104 (35.62%) in 2022. (Figure 1)



**Figure 1:** Total Number of patients with breast disease presented in SOPD per year (2020-2022)

52% patients were treated by surgical treatment and 48% patients received conservative treatment (Figure 2).



**Figure 2:** Ratio of patients treated surgically / conservatively

Fibrocystic disease was the commonest disease 134 (45.89%) followed by fibroadenoma 56 (19.18%) and carcinoma 17 (5.82%). (Table I).

**Table I**

*Pattern of breast diseases presenting to the Surgical OPD*

| Disease                          | Number | Percentage |
|----------------------------------|--------|------------|
| Fibrocystic disease              | 134    | 45.89      |
| Fibroadenoma                     | 56     | 19.18      |
| Breast abscess                   | 31     | 10.62      |
| Carcinoma                        | 17     | 5.82       |
| Accessory axillary breast tissue | 15     | 5.14       |
| Cracked nipple                   | 11     | 3.77       |
| Granulomatous mastitis           | 11     | 3.77       |
| Mastalgia                        | 10     | 3.43       |
| Duct ectasia                     | 4      | 1.37       |
| Fat necrosis                     | 3      | 1.03       |
| Lipoma                           | 3      | 1.03       |
| Galactocele                      | 3      | 1.03       |
| Eczematous lesion in nipple      | 2      | 0.69       |
| Phylloides tumor                 | 1      | 0.34       |
| Total                            | 292    | 100%       |

The breast disease and age distribution of the patients are shown in table II. Fibrocystic disease was commonly found in patients of the age group of 30-49yrs. Fibroadenoma was common in the age group of 20-29yrs. Whereas carcinoma was common in the age group of 50-59 yrs.

**Table II**

*Age distribution of breast disorders*

| Age/Years | Number | %     | Fibrocystic disease | Fibroadenoma | Breast abscess | Carcinoma | Miscellaneous |
|-----------|--------|-------|---------------------|--------------|----------------|-----------|---------------|
| 10-19     | 35     | 11.99 | 10                  | 12           | 9              | -         | 4             |
| 20-29     | 96     | 32.88 | 33                  | 28           | 8              | -         | 27            |
| 30-39     | 78     | 26.71 | 41                  | 14           | 3              | 2         | 18            |
| 40-49     | 51     | 17.46 | 35                  | 1            | 8              | 3         | 4             |
| 50-59     | 20     | 6.85  | 8                   | 1            | 3              | 8         | -             |
| 60-69     | 11     | 3.77  | 7                   | -            | -              | 3         | 1             |
| 70-79     | 1      | 0.34  | -                   | -            | -              | 1         | -             |
| Total     | 292    | 100   | 134                 | 56           | 31             | 17        | 54            |

Lump in breast was the commonest symptom in females of the age group of 31-40 years. (Table III)

**Table III**

*Common presenting symptoms in patients with breast diseases*

| Symptoms                     | Number | Percentage |
|------------------------------|--------|------------|
| Pain in breast               | 126    | 43.1       |
| Lump in breast               | 106    | 36.3       |
| Lumpiness and pain in breast | 87     | 29.8       |
| Nipple discharge             | 45     | 15.4       |
| Nipple retraction            | 23     | 7.9        |
| Lump in axilla               | 19     | 6.5        |
| Eczema                       | 2      | 0.7        |

Excision and biopsy was the commonest surgical procedure performed. (Table IV)

**Table IV**

*Different surgical procedures done in patients presenting with breast diseases*

| Type of Surgery           | Number | Percentage |
|---------------------------|--------|------------|
| Excision                  | 76     | 26         |
| Wide local excision       | 29     | 9.93       |
| Incision & drainage       | 28     | 9.6        |
| Simple mastectomy         | 13     | 4.45       |
| Excision of axillary lump | 3      | 1          |
| Redo surgery              | 2      | 0.68       |
| Toilet mastectomy         | 1      | 0.34       |
| Total                     | 152    | 52         |

### Discussion:

In our study, fibrocystic disease was the commonest (45.89%) and fibroadenoma the second most common disease (19.18%). Breast abscess (10.62%) and carcinoma (5.82%) were third & fourth most common disease respectively. Ayoade et al., showed that fibroadenoma was the most common breast disease at their setting (26.2% and 48.7% respectively).<sup>9</sup> Carcinoma was the second most common breast disease in Nigeria by Ayoade et al.<sup>9</sup>

In our study, the age range was from 10 to 79 years, the commonest age group was 20-29 year group. Benign breast diseases were common in younger age group (20-39) whereas carcinoma was more common in older age group (40-69). This is quite similar to many other studies. Das et

al and other authors reported the common age group for benign breast disease to be 21-40 years.<sup>10</sup>

Roy et al., reported carcinoma in 11.6% of cases among breast patients attending a tertiary care hospital, which aligns with the malignant proportion seen in our study.<sup>11</sup> Panchal observed fibroadenoma as the predominant benign lesion, followed by fibrocystic disease and breast abscess.<sup>12</sup> Similarly, Hiremath and Hegde., found fibroadenoma (30%) and fibrocystic disease (28%) as the most common benign conditions.<sup>6</sup> However, in our study, fibrocystic disease predominated, consistent with the findings of Gupta et al., and Selvakumaran and Sangma, who also noted a higher incidence of fibrocystic changes compared to fibroadenoma.<sup>13,14</sup>

Benign breast diseases were more prevalent than malignant ones, similar to the observations of Karki et al. and Alam et al., who reported benign lesions forming the majority (70–80%) of breast pathologies.<sup>15,16</sup> The high incidence of benign lesions in our study reflects the younger age distribution of our patients. In our series, the commonest age group was 20–29 years, followed by 30–39 years. This finding is in accordance with Devkota et al., and Pote et al., who also found that benign breast diseases predominated in women between 20 and 40 years.<sup>17,18</sup>

Breast carcinoma was more common among women aged 50–59 years in our study, which correlates well with the findings of Khan et al., who noted that malignant cases were concentrated in the 5th and 6th decades of life.<sup>19</sup> This pattern supports the established fact that benign diseases affect younger women, while malignancy is more frequent in older age groups. Sharma et al., and Kumar et al., also observed a similar age-related trend in benign and malignant lesions.<sup>20,21</sup>

Regarding presenting symptoms, pain in the breast (43.1%) was the most frequent complaint in our study, followed by lump (36.3%) and both pain and lump (29.8%). Devi et al., and Pachani et al., reported similar findings, with breast lump being the predominant symptom followed by mastalgia.<sup>22,23</sup> The variation in symptom predominance may be due to differences in awareness and health-seeking behavior among populations.

In our study, 52% of patients required surgical treatment, while 48% were treated conservatively. The most common surgical procedure was excision and biopsy (26%), followed by incision and drainage (9.6%) for abscess cases. Anuradha et al., emphasized the importance of triple assessment - clinical, radiological, and cytological evaluation - in selecting appropriate management strategies.<sup>24</sup> Furthermore, Devkota et al., highlighted the role of imaging modalities in accurate diagnosis and treatment planning.<sup>25</sup>

The relatively lower incidence of carcinoma (5.82%) in our study may reflect the fact that the data were derived from an outpatient setting, where benign and early-stage diseases are more common. However, like many South Asian studies, late presentation remains an issue, as highlighted by Adhikari et al., and Sabir et al., who noted delayed diagnosis and limited awareness as major contributors to poor breast cancer outcomes.<sup>26,27</sup>

### Conclusion:

The present study reaffirms that benign breast diseases, particularly fibrocystic changes and fibroadenoma, constitute the majority of breast conditions in women attending surgical OPDs. Regular breast screening, early evaluation of breast symptoms, and public awareness programs are essential to detect malignant lesions earlier and improve overall outcomes.

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